

**Dr. Douglas:** I cannot add anything further, except to say that, without doubt, the international system of units will change. For example, I can say that within perhaps ten years the definition of the metre will not be precisely the same as it is now, it will be a more precise definition—which will not change it within normal trade practices.

**Hon. Mr. Basford:** There is the definition there.

**The Chairman:** Yes, I see that.

**Hon. Mr. Basford:** What Dr. Douglas is saying is that, over the years, with advances in physics and the ability to measure, that definition will change and improve.

**The Chairman:** I am trying to get to the position, in understanding this, where it may be said that, in making a change of this kind, whether in some fashion by alteration or by adding other words, you are not doing a legislative act. That is what I am trying to get at. We were all through that problem on another occasion.

**Hon. Mr. Basford:** Yes, I know we were, and I knew that that was what you were trying to get to, and of course I was not falling into that trap.

**The Chairman:** I can tell you frankly that I was not setting a trap. As a matter of fact, in the way in which I presented it, I thought I was looking to find a way in which this would be justified, but not as legislation.

**Hon. Mr. Basford:** It is not, of course, because what is proposed there, as Dr. Douglas says, is to change the scientific definition of metre—not to change the metre as a unit of measurement, but to change the definition of metre to take into account improvements in science, as might be agreed, for example, in the Conference on Weights and Measures. I must admit I do not understand what that definition of metre means, because we are into higher physics here.

**Senator Burchill:** In my ignorance, may I ask whether a wave length is always the same length?

**Dr. Douglas:** In accuracy as we know it today it is the most precise thing we have that a physicist can tie length to, and, therefore, this has been selected specifically because it is the same.

**The Chairman:** Mr. Minister, what I am getting at, really, is whether the descriptive words that you have used by adding or deleting are really the language that best describes the authority you are looking for. Or is that accomplished by changing? You do have the authority under regulations to make definitions.

**Hon. Mr. Basford:** But you may well want to add basic units of measurement, although for the moment I cannot think of one. But I would have to consult Dr. Douglas on that. But for example, the last one there, No. 6, as I recall it, the candela as a measurement of luminous intensity, it is a relatively new measurement. Is that not right, Dr. Douglas?

**Dr. Douglas:** Yes.

**Hon. Mr. Basford:** And there may well be new units of measurement developed.

**Dr. Douglas:** One could assume that perhaps some day a unit of sound measurement, a measurement of sound intensity, could be added to this list.

**The Chairman:** You are not helping me very much. You know the basic thing that is bothering me. If this is not an exercise in legislative authority, then it is perfectly all right. That is what I am looking for some help on.

**Hon. Mr. Basford:** I do not see that it is an exercise in legislative authority. It seems to me that it is a valid regulatory function in an extremely scientific area—determining units of measurement in accordance with the international system of units—in order to provide the executive with the power to take into account changes in definition and the establishment of new units of measurement and to put into the act by way of regulation those new units or those new definitions. One surely does not want to have to come back to Parliament merely to change a definition. For example, if one looks at the definition of “second”, the unit for measurement of time, it is the duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium 133 atom. Now, I don't think if physics develops a better definition for “second” that Parliament wants to enact that new definition. It is properly a regulatory function rather than a legislative function.

**The Chairman:** It occurred to me that perhaps the proper place for this right to extend or change or vary should be right in the schedule itself.

**Hon. Mr. Basford:** I am sorry, but I do not follow you.

**The Chairman:** Instead of in the statute.

**Hon. Mr. Basford:** But surely, if you are going to change a schedule, the right to do so must be in the statute; not in the schedule.

**The Chairman:** Not if the statute provides the authority and approves the schedule in the form in which it is, and if the form provides for such variations as science may develop or make necessary.

**Senator Pearson:** Mr. Chairman, if you turn to page 28 of the bill, you will find that if you pass this act you are giving the Governor in Council the right to change a mile to 1,800 yards instead of 1,760 and so on down the line. I know it is not intended to do that, but I think it is rather stupid to say that under this subsection (b), page 4, the Governor in Council may amend schedule II by adding thereto or deleting therefrom any Canadian unit of measurement, together with its symbol or abbreviation and its definition.

**Hon. Mr. Basford:** What that refers to, Senator, is that we could, for example, going along with Senator Connolly's (Ottawa West) line of questioning, add “bar-